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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,426	12/28/2000	Thomas J. Grimsley	XXT-073	7863
7590	05/05/2004		EXAMINER KAO, CHIH CHENG G	
Patrick R. Roche FAY, SHARPE, FAGAN, MINNICH & McKEE, LLP 1100 Superior Avenue 7th Floor Cleveland, OH 44114-2579			ART UNIT	PAPER NUMBER
			2882	
			DATE MAILED: 05/05/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/750,426

Applicant(s)

GRIMSLEY, THOMAS J.

Examiner

Chih-Cheng Glen Kao

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 8-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings were received on 3/30/04. These drawings are acceptable.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 8, lines 8 and 16, and claim 17, lines 7 and 15, the phrase "preferentially" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). The claims have been examined as best interpreted by the Examiner as follows.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1-3, 5, 6, 8, 11, 12, 15-17, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. (US Patent 5135891) in view of Koizumi et al. (US Patent 5698892).

4. Regarding claims 1 and 3, Ikeno et al. discloses a method of fabricating an electro-optical device (Title and left side of Figs. 5A-5D) comprising the steps of providing a substrate (Fig. 5C, #1) with insertion of a first photosensor (Fig. 5A, #7), applying a first filter layer (Fig. 5C, #27) above a substrate, applying an inter-filter layer (Fig. 5C, #25) over at least the first filter layer and an area not covered by the first filter layer, thereby smoothing a top surface of the electro-optical device without removing any material from the inter-filter layer (left side of Figs. 5C and 5D), and applying a second filter layer (Fig. 5C, #28) over at least a portion of the inter-filter layer without removing the inter-filter layer.

However, Ikeno et al. does not disclose mounting in an image forming system.

Koizumi et al. teaches mounting in an image forming system (col. 1, lines 12-25).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to modify the method of Ikeno et al. with the mounting in an image forming system of Koizumi et al., since one would be motivated to mount for better connecting the components together (col. 1, lines 12-25) as implied from Koizumi et al.

5. Regarding claim 2, Ikeno et al. further discloses applying a base layer before applying the first filter (Fig. 5C, #24).

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6. Regarding claim 5, Ikeno et al. further discloses an inter-filter layer as an optically transmissive, film-forming polymer material (col. 5, lines 6-10 and 50).

7. Regarding claim 6, Ikeno et al. further discloses the first and second filters with pigments (col. 5, lines 35-40).

8. Regarding claims 8 and 17 and for purposes of being concise, Ikeno et al. in view of Koizumi et al. suggests a method and device as recited above.

Ikeno et al. further discloses insertion of a second photosensor (Fig. 5A, #7), covering an area of the base layer (Fig. 5D, #24) overlaying the first photosensor (Fig. 5D, #7) with a patterned first filter layer (Fig. 5C, #27) allowing light having a wavelength within a first range to reach the first photosensor, and applying a patterned second filter layer (Fig. 5D, #28) over the second photosensor.

However, Ikeno et al. does not specifically disclose a second filter allowing light having a wavelength within a second range to reach the second photosensor.

Koizumi et al. further teaches a second filter allowing light having a wavelength within a second range to reach the second photosensor (Fig. 11D, "B", "R", or "G").

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to further modify the suggested method and device of Ikeno et al. with the different color ranges of Koizumi et al., since one would be motivated incorporate this to better provide multi-functions and greater processing abilities of the image signal (col. 1, lines 24-27) as implied from Koizumi et al.

9. Regarding claim 11, Ikeno et al. further discloses the first and second filters with pigments (col. 5, lines 35-40).

10. Regarding claims 12, 15, and 20, Ikeno et al. further discloses applying a second inter-filter layer on the second filter and on the first inter-filter layer not covered by the second filter, thereby smoothing a second top surface (Fig. 5C, #26).

11. Regarding claim 16, Ikeno et al. further discloses a linear array chip (Fig. 7).

12. Regarding claim 21, Ikeno et al. further discloses applying an inter-filter layer (Fig. 5C, #25) over a patterned first filter (Fig. 5C, #27) and one of the substrate or a base layer (Fig. 5C, #24).

13. Regarding claim 22, Ikeno et al. further discloses no polishing or grinding (col. 4, line 55, to col. 5, line 19).

14. Claims 4, 9, 10, 13, 14, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. in view of Koizumi et al. as applied to claims 1, 8, and 17 above, and further in view of McColgin et al. (US Patent 4553153).

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15. Regarding claims 4, 9, 13, and 18, Ikeno et al. in view of Koizumi et al. suggests a method and device as recited above. Ikeno et al. further discloses an inter-filter layer or base layer as translucent or clear (col. 5, lines 6-10 and 50).

However, Ikeno et al. does not specifically disclose an inter-filter layer as colorless.

McColgin et al. teaches an inter-filter layer as colorless (Fig. 2, #16, col. 7, lines 20-30, and col. 8, lines 4-8).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to modify the suggested method and device of Ikeno et al. in view of Koizumi et al. with the colorless inter-filter layer of McColgin et al., since one would be motivated to incorporate this to simplify this portion of the color filter to be the only portion that is filtering (col. 7, lines 20-30) as implied from McColgin et al. rather than having two filters being colored and creating a combined filtering effect, which would require making more calculations to figure out what exactly will be filtered.

16. Regarding claims 10, 14, and 19, Ikeno et al. in view of Koizumi et al. suggests a method and device as recited above.

However, Ikeno et al. does not disclose a layer with acrylic.

McColgin et al. teaches a layer with acrylic (col. 5, lines 35-62).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to modify the suggested method and device of Ikeno et al. in view of Koizumi et al. with the acrylic layer of McColgin et al., since one would be motivated to incorporate it for its high planarization factors as implied from McColgin et al. (col. 5, lines 35-

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62). Also note that it would have been within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

17. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. in view of Koizumi et al. as applied to claim 1 above, and further in view of Park et al. (US Patent 5053298).

Ikeno et al. in view of Koizumi et al. suggests a method as recited above.

However, Ikeno et al. does not disclose an inter-layer with a color to modify an incoming wavelength.

Park et al. teaches an inter-layer with a color to modify an incoming wavelength (Fig. 1, #9 or 15).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to modify the suggested method of Ikeno et al. in view of Koizumi et al. with the color inter-layer of Park et al., since one would be motivated to incorporate this for better filtering any one of the colored lights magenta, cyan, or yellow as shown by Park et al. (col. 1, lines 56-62).

#### ***Response to Arguments***

18. Applicant's arguments filed 3/30/2004 have been fully considered but they are not persuasive.



Regarding claims 1, 8, and 17, Ikeno et al. does disclose smoothing a top surface of the electro-optical device (Fig. 5D, left electro-optical device) without removing any material from the inter-filter layer (Fig. 5D, #25 or 26).

The section that the Applicant refers to in Ikeno et al. (col. 5, lines 43-51) does involve removing some material. However, the material removed is in between different electrical-optical devices.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (571) 272-2492. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
gk

  
DAVID V. BRUCE  
PRIMARY EXAMINER